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| **Multivariable logistic regression analysis** |
| **Determinant** | **Coef** | **S.E.** | **Exp(coef)** | **95% CI Exp(coef)** |
| Org = 1 | REF |  |  |  |
| Org = 2 | 2.12 | 0.41 | 8.36 | 3.73 – 18.74 |
| Org = 3 | 2.64 | 0.93 | 14.01 | 2.25 – 87.32 |
| ANCA =1 | REF |  |  |  |
| ANCA = 2  | 2.64 | 0.55 | 14.00 | 4.73 – 41.46 |
| ANCA = 3 | 2.91 | 0.43 | 18.43 | 7.97 – 42.61 |

**Table 5: Multivariable logistic regression analysis of factors related to a clinical diagnosis of ANCA-associated vasculitis in ANCA positive patients. Logistic regression with 50 bootstrap samples and backward elimination. Variables entered: Age, sex, serum creatinine, ANCA in 3 groups: ANCA 1 = 1-3x cut-off, ANCA 2 = 4-6x cut-off, ANCA 3 = ≥7x cut-off. Number of affected organ systems in 3 groups: Org 1 = 0-1 organ systems involved. Org 2 = 2 organ systems involved. Org 3 ≥ 3 organ systems involved.**

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| **Multivariable logistic regression analysis** |
| **Determinant** | **Coef** | **S.E.** | **Exp(coef)** | **95% CI Exp(coef)** |
| Org =1 | REF |  |  |  |
| Org = 2 | 1.89 | 0.37 | 6.50 | 3.19 – 13.25 |
| Org = 3 | 2.35 | 0.83 | 10.25 | 2.04 – 51.47 |
| ANCA = 1 | REF |  |  |  |
| ANCA = 2 | 2.35 | 0.49 | 10.25 | 3.94 – 26.69 |
| ANCA = 3 | 2.60 | 0.38 | 13.06 | 6.23 – 27.34 |

**Table 6: Shrinkage factor: 0.8904448 applied on model in table 5. AAV = ORG + ANCA (c-statistic 0.89)**

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| **Multivariable logistic regression analysis** |
| **Determinant** | **Coef** | **S.E.** | **Exp(coef)** | **95% CI Exp(coef)** |
| Org = 0 | REF |  |  |  |
| Org = 1 | 2.20 | 0.40 | 9.05 | 4.11 – 19.93 |
| ANCA =0 | REF |  |  |  |
| ANCA = 1 | 2.86 | 0.39 | 17.54 | 8.10 – 37.97 |

**Table 7. Multivariable logistic regression analysis of factors related to a clinical diagnosis of ANCA-associated vasculitis in ANCA positive patients. Logistic regression with 50 bootstrap samples and backward elimination. Variables entered: Age, sex, serum creatinine, ANCA in 2 groups: ANCA 0 = < 4x cut-off. ANCA 1= ≥4x cut-off. ORG 0 =0-1 organs systems involved. ORG 1 ≥ 2 organ systems involved.**

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| **Multivariable logistic regression analysis: final model** |
| **Determinant** | **Coef** | **S.E.** | **Exp(coef)** | **95% CI Exp(coef)** |
| Org = 0 | REF |  |  |  |
| Org = 1 | 2.04 | 0.37 | 7.67 | 3.69 – 15.94 |
| ANCA = 0 | REF |  |  |  |
| ANCA = 1 | 2.60 | 0.37 | 14.16 | 6.93 – 28.94 |

**Table 8. Final model. Shrinkage factor: : 0.9253235 applied on model in table 7. AAV = ORG + ANCA (c-statistic 0.88)**

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| **Multivariable logistic regression analysis: sensitivity analysis** |
| **Determinant** | **Coef** | **S.E.** | **Exp(coef)** | **95% CI Exp(coef)** |
| Org = 1 | REF |  |  |  |
| Org = 2 | 1.94 | 0.51 | 6.95 | 2.58 – 18.73 |
| Org = 3 | 2.75 | 1.08 | 15.70 | 1.89 – 130.60 |
| ANCA =1 | REF |  |  |  |
| ANCA = 2 | 2.08 | 0.68 | 7.97 | 2.09 – 30.35 |
| ANCA = 3 | 2.86 | 0.52 | 17.48 | 6.35 – 48.10 |

**Table 9. Sensitivity analysis including patients without AAV versus patients with biopsy proven AAV. Multivariable logistic regression analysis of factors related to a clinical diagnosis of ANCA-associated vasculitis in ANCA positive patients. Logistic regression with 50 bootstrap samples and backward elimination. Variables entered: Age, sex, serum creatinine, ANCA in 3 groups: ANCA 1 = 1-3x cut-off, ANCA 2 = 4-6x cut-off, ANCA 3 = ≥7x cut-off. Number of affected organ systems in 3 groups: Org 1 = 0-1 organ systems involved. Org 2 = 2 organ systems involved. Org 3 ≥ 3 organ systems involved.**

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| **Multivariable logistic regression analysis: sensitivity analysis** |
| **Determinant** | **Coef** | **S.E.** | **Exp(coef)** | **95% CI Exp(coef)** |
| Org =1 | REF |  |  |  |
| Org = 2 | 1.71 | 0.45 | 5.52 | 2.30- 13.24 |
| Org = 3 | 2.43 | 0.95 | 11.34 | 1.75 – 73.40 |
| ANCA = 1 | REF |  |  |  |
| ANCA = 2 | 1.83 | 0.60 | 6.24 | 1.92 – 20.27 |
| ANCA = 3 | 2.52 | 0.46 | 12.46 | 5.10 – 30.42 |

**Table 10. Shrinkage factor: 0.8344102 applied on model in table 9. AAV = ORG + ANCA (c-statistic 0.90)**

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| **Multivariable logistic regression analysis: sensitivity analysis** |
| **Determinant** | **Coef** | **S.E.** | **Exp(coef)** | **95% CI Exp(coef)** |
| Org = 0 | REF |  |  |  |
| Org = 1 | 2.05 | 0.49 | 7.73 | 2.93 – 20.37 |
| ANCA =0 | REF |  |  |  |
| ANCA = 1 | 2.68 | 0.48 | 14.54 | 5.66 – 37.35 |

**Table 11. Sensitivity analysis including patients without AAV versus patients with biopsy proven AAV. Multivariable logistic regression analysis of factors related to a clinical diagnosis of ANCA-associated vasculitis in ANCA positive patients. Logistic regression with 50 bootstrap samples and backward elimination. Variables entered: Age, sex, serum creatinine, ANCA in 2 groups: ANCA 0 = < 4x cut-off. ANCA 1= ≥4x cut-off. ORG 0 =0-1 organs systems involved. ORG 1 ≥ 2 organ systems involved.**

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| **Multivariable logistic regression analysis: sensitivity analysis** |
| **Determinant** | **Coef** | **S.E.** | **Exp(coef)** | **95% CI Exp(coef)** |
| Org = 0 | REF |  |  |  |
| Org = 1 | 1.80 | 0.44 | 6.07 | 2.58 – 14.26 |
| ANCA = 0 | REF |  |  |  |
| ANCA = 1 | 2.36 | 0.42 | 10.60 | 4.61 – 24.34 |

**Table 12. Final model sensitivity analysis. Shrinkage factor: 0.9348781 applied on model in table 11. AAV = ORG + ANCA (c-statistiek 0.88)**